

KSW Wire Rope Overload Guard

Applications

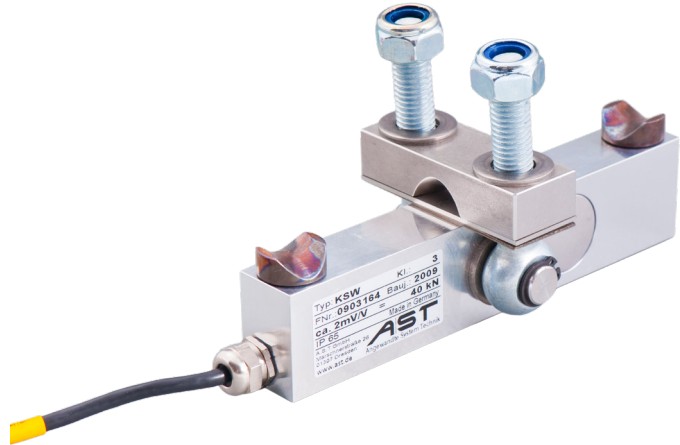
- Sensor for measuring of loads at wire ropes (Ø 6-22mm)

Features

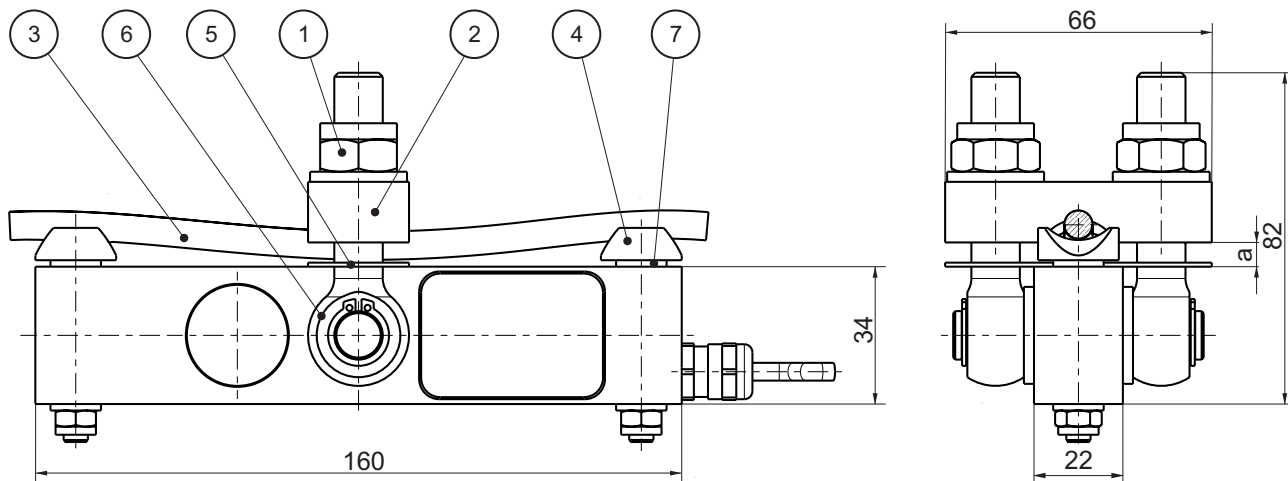
- Suitable for rope loads from 10kN to 70kN
- Hardened rope support
- Environmental protection IP 65

Options

- Integrated amplifier
- CANopen interface



Dimensions (mm)



- 1 self-locking nut, width accross flat 17
2 clamping yoke
3 rope
4 rope support

- 5 shim (optional)
6 eye bolt
7 washer (optional)

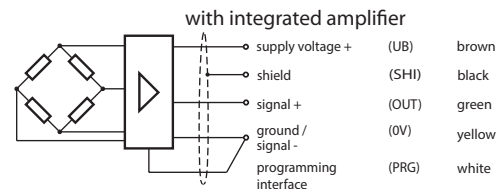
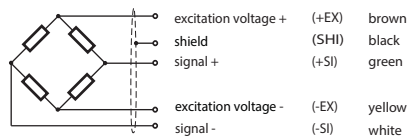
Maximum Rope Load

not binding guiding values (measured with test rope Ø 12mm):

Rope Load / kN	10	20	30	40	50	60	70
Thickness of shim (mm)	-	-	-	-	1	1.5	2
Washer (number per support)	3	2	1	-	-	-	-
Distance dimension a (mm)	6.80	6.80	6.80	6.42	8.22	8.30	8.60
Signal (mV/V)	0.89	1.40	1.68	1.81	1.75	2.00	1.79

Wiring Code

Cable length 3m



Specifications

Accuracy class	% F _{nom}	3	with Integrated Amplifier
Tested measuring force	kN	8	8
Conforms to rated load (wire rope)	kN	ca. 40	ca. 40
Rope diameter	mm	6 - 22	6 - 22
Rated characteristic value (C _{nom})	mV/V	approx. 2 ¹⁾	
Zero signal tolerance	%	≤ 3	
Reference excitation voltage (U _{ref})	VDC	5	
Operating range of excitation voltage (BUG)	VDC	0.5 ... 12	
Input resistance (R _e)	Ω	380 ± 30	
Output resistance (R _a)	Ω	352 ± 1.5	
Insulation resistance (R _{is})	Ω	> 5 x 10 ⁹	
Temperature effect on zero signal (TK ₀)	%/10K	≤ 0.3	≤ 0.3
Temperature effect on characteristic value (TK _c)	%/10K	≤ 0.5	≤ 0.5
Reference temperature (T _{ref})	°C	+23	+23
Rated temperature range (B _{T,nom})	°C	-20 ... +70	-20 ... +70
Operating temperature range (B _{T,G})	°C	-30 ... +70	-30 ... +70
Storage temperature range (B _{T,s})	°C	-40 ... +70	-40 ... +70
Environmental protection (EN 60529)		IP 65	IP 65
Supply voltage	VDC		19 ... 28
Input current	mA		35 (at 24V)
Output signal for compressive force (0...F _N)			
Alternatively:			
- Voltage output signal (max. Load: 5mA)	V		0 ... 10
- Current output signal	mA		4 ... 20
- Maximum resistance	Ω		300

All data according to VDI/VDE/DKD 2638

1) Tested with rope Ø 14mm without shims

Order Example

Type Code	Description
KSW/40kN/3	Wire rope overload
KSW-E/40kN/3/0...10V	Wire rope overload with standard signal output, 0...10V
KSW-E/40kN/3/4...20mA	Wire rope overload with standard signal output, 4 ... 20mA
KSW-DI/40kN/3/CANopen	Wire rope overload with CANopen
	(Please note data sheet „Force Transducer with CANopen Interface“!)

Accessoires (incl. in scope of delivery)

	Description
1 piece	Clamping yoke
1 set	2x Shim 0.5mm thick and 1x shim 1.5mm thick, 4x washer DIN125-6,4-A2

Recommended Electronics

Type Code	Description
BS805	Strain gauge switching amplifier

